REMARKS

Claims 1-33 remain pending in the application. Reconsideration is respectfully requested in light of the following remarks.

Section 102(e) Rejection:

The Office Action rejected claims 1, 12 and 23 under 35 U.S.C. § 102(e) as being anticipated by Ford et al. (U.S. Patent 5,963,947) (hereinafter "Ford"). Please note that in the Office Action, the Examiner refers to Ford et al. (U.S. Patent 5,963,947) as "Lehman ('947)." Applicants, however, refer to this patent as "Ford" for clarity over Lehman et al. (U.S. Patent 5,974,420). Applicants traverse the rejection of claims 1, 12 and 23 for at least the following reasons.

Regarding claim 1, the Examiner contends that Ford discloses a method comprising: "[a]ccessing a first space, wherein the first space comprises a first network-addressable storage location, wherein information usable to access the first space is provided in an advertisement for the first space, wherein the advertisement for the first space comprises a first schema, and wherein the first schema specifies one or more messages usable to invoke functions of the first space." Applicants respectfully disagree with the Examiner's interpretation of Ford.

Ford teaches a method, called "T Spaces" for dynamically adding functionality to a server that allows new operators and JAVA-based operator handlers to be installed on a server for future use (Ford, column 7, line 66 – column 8, line17, and column 8, lines 26-35).

Ford fails to teach that information usable to access a space is <u>provided in an advertisement</u> for the space. Ford fails to mention advertisements at all. Ford teaches only that clients include "a communication library 202 for sending commands or requests to the T Spaces server" (Ford, column 6, lines 29 – 31). Applicants can find no reference

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to the use of an advertisement providing information usable to access a first space, as the Examiner contends.

Further, Ford fails to teach that an <u>advertisement</u> for the first space <u>comprises a first schema</u>, wherein the <u>first schema specifies one or more messages</u> usable to invoke functions on the first space. As described above, Ford fails to teach the use of an advertisement for the first space and thus also fails to teach such an advertisement comprising a schema specifying one or more messages usable to invoke functions on first space. In addition, Ford specifically <u>teaches away</u> the use of schemas by teaching that Tuplespaces do not rely on a schema and stressing the benefits from the added flexibility of not using a schema (Ford, column 4, lines 28-31, and column 5, lines 14-18).

Further regarding claim 1, Ford clearly fails to teach a client sending to the first space one of the messages specified by the first schema as the Examiner suggests. As shown above, Ford teaches away from the use of a schema. In contrast, Ford teaches the use of a specific operator, NewTupleSpace(), that a client may use to create a new TupleSpace within a T Space.

As shown above, Ford fails to teach the use of advertisements and teaches away from the use of schemas. Therefore, Ford must necessarily fail to teach wherein information usable to access the second space is provided in <u>an advertisement for the second space</u>, wherein the advertisement for the second space <u>comprises a second schema</u>, and wherein the <u>second schema specifies one or more messages usable to invoke functions of the second space</u>; and the request client accessing the second space by <u>sending to the second space one of the messages specified by the second schema</u>.

For at least the reasons given above, the rejection of claim 1 is not supported by the prior art and its removal is respectfully requested. Similar remarks as discussed above in regard to claim 1 apply to claims 12 and 23.

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Section 103(a) Rejections:

The Office Action rejected claims 1, 5-12, 16-23 and 27-33 under 35 U.S.C. § 103(a) as being unpatentable over Lehman (U.S. Patent 5,974,420) (hereinafter "Lehman") in view of Ford.

Regarding claim 1, the Examiner contends that Lehman discloses a method comprising: "[a]ccessing a first space, wherein the first space comprises a first network-addressable storage location, wherein information usable to access the first space is provided in an advertisement for the first space, wherein the advertisement for the first space comprises a first schema, and wherein the first schema specifies one or more messages usable to invoke functions of the first space." Applicants respectfully disagree with the Examiner's interpretation of Lehman.

Lehman teaches the use of a Rhonda operator for use within T Spaces wherein to Rhonda operators swap their tuples when their template arguments match. (Lehman, column 8, line 65 – column 9, line 3).

Lehman fails to teach that information usable to access a space is <u>provided in an advertisement</u> for the space. Lehman fails to mention advertisements at all. Lehman teaches only that clients include "a communication library 202 for sending commands or requests to the T Spaces server" (Lehman, column 4, lines 56 – 61). Applicants can find no reference to the use of an advertisement providing information usable to access a first space, as the Examiner contends.

The Examiner recognizes that Lehman fails to disclose "wherein the advertisement for the first space comprises a first schema, and wherein the first schema specifies one or more messages usable to invoke functions of the first space; a request client requesting creation of a second space by specifically sending to the first space one of the messages specified by the first schema; a second client, wherein the advertisement for the second space comprises a second schema, and wherein the second schema

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specifies one or more messages usable to invoke functions of the second space; and a requesting client accessing the second space by sending to the second space one of the messages specified by the second schema." The Examiner implies, however, that Ford teaches these features. Applicants disagree with the examiner.

As argued above in the response to the 102(e) rejection of claim 1, Ford fails to teach that an <u>advertisement</u> for the first space <u>comprises a first schema</u>, wherein the <u>first schema specifies one or more messages</u> usable to invoke functions on the first space. Additionally, Ford specifically <u>teaches away</u> the use of schemas by teaching that Tuplespaces do not rely on a schema and stressing the benefits from the added flexibility of not using a schema (Ford, column 4, lines 28-31, and column 5, lines 14-18).

As shown above, Ford fails to teach wherein information usable to access the second space is provided in <u>an advertisement for the second space</u>, wherein the advertisement for the second space <u>comprises a second schema</u>, and wherein the <u>second schema specifies one or more messages usable to invoke functions of the second space</u>; and the request client accessing the second space by <u>sending to the second space one of the messages specified by the second schema</u>.

For at least the reasons given above, the rejection of claim 1 is not supported by the prior art and its removal is respectfully requested. Similar remarks as discussed above in regard to claim 1 apply to claims 12 and 23.

Regarding claim 6, the Examiner argues that "further consideration" of Lehman in view of Ford, implies the need for a means of distinguishing one operator location from another and that the use of Uniform Resource Identifiers (URI) for this purpose would have been obvious. The Examiner also states that "[t]he motivation to use URIs is noted within both [Lehman and Ford], within the claims, which note the receipt of information at the respective operators" and that "[i]n order to receive information, the operators would inherently need a means to located, and thus the use of URIs is inherent and

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obvious." Applicants strongly disagree with the Examiner's characterization of Lehman in view of Ford.

Both Lehman and Ford describe various features of T-Spaces, which are built on top of Tuplespaces (Lehman, column 3, lines 61-65, and Ford column 4, lines 46-54). Additionally, both Lehman and Ford teach that operators are primitives, or *commands,* applied to Tuples in Tuplespace (Lehman, column 1, lines 58-65 and Ford, column 3, lines 20-25). Lehman additionally teaches that a command or request generally comprises one or more operators and its associated parameters. (Lehman, column 5, lines 41-43, and Ford, column 7, lines 13-14). Hence, under both Lehman and Ford, <u>operators are commands</u> that take parameters, and <u>not locations</u> as the Examiner suggests.

This is further shown in the Examiner's cited reference (the claims) of both Lehman and Ford. For example, Lehman describes, "receiving a first operator" (Lehman, column 9, line 37). Thus, neither Lehman nor Ford, "note the receipt of information at the respective operators" as the Examiner contends. Further, since operators are commands, and have no locations, Applicants assert that neither Lehman nor Ford imply the need for a means of distinguishing one operator location from another.

Furthermore, both Lehman and Ford teach away from having separate locations in T-Spaces. Both Lehman and Ford teach that "the Handler Factory produces an appropriate handler for the operator, wherein the handler is an implementation for the operator" and that this "architecture provides the maximum flexibility since the Hander Factory may custom-tailor the implementation of the operators handler to the types of operands or parameters provided" (Lehman, column 5, line 62 – column 6, line 1 and Ford, column 7, lines 31 – 39).

Additionally, since neither Lehman nor Ford teach any reference to URIs nor do they include any teaching or suggestion of either a need or a benefit from using URIs, the combination of Lehman in view of Ford does not suggest or imply the specific use of

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URIs. The Examiner's statement that the use of URIs is inherent and obvious in Lehman and Ford is clearly incorrect.

Therefore, for at least the reasons given above, the rejection of claim 6 is not supported by the prior art and its removal is respectfully requested. Similar remarks as discussed above in regard to claim 6 apply to claims 17, and 28.

The Examiner rejected claim 7 "on the basis that Lehman teaches the use of different computer languages." At the Examiner's cited reference Lehman is stating, "different computer *programming* languages ... could be substituted for those described herein" (Lehman, column 9, lines 10-14). Applicants assert that Lehman is referring to programming languages that may used to create programs that may utilize his invention and thus has no bearing on a *schema* that is expressed in a *data representation* language as the Examiner asserts.

Additionally, both Lehman and Ford both teach the use of Tuplespaces, which, as shown above, gain flexibility from not using a schema, and therefore teach away from using a data representation language in such a manner. Therefore, Applicants can see no motivation to modify Lehman in view of Ford to use a schema expressed in a data representation language as the Examiner contends.

Therefore, for at least the reasons given above, the rejection of claim 7 is not supported by the prior art and its removal is respectfully requested. Similar remarks as discussed above in regard to claim 7 apply to claims 18, and 29.

Regarding claim 8, the Examiner states that the motivation to combine the XML with T-Spaces is noted within Lehman, "wherein the use of different computer languages is recognized at possible" and further states that "as XML was in existence at the time of invention... the use of the same as a programming language would have been obvious." As regarding claim 7, above, at the Examiner's cited reference Lehman is stating that "different computer *programming* languages ... could be substituted for those described"

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(Lehman, column 9, lines 10-14). Applicants assert that Lehman is referring to *programming* languages that may used to create programs that may utilize his invention and thus has no bearing on data representation languages, such as XML, which are used for very different purposed than computer programming languages.

Further, Applicant can find no teaching or suggestion in either Lehman or Ford regarding the use of a data representation language. Therefore, the combination of Lehman in view of Ford fails to teach or suggest any desire or benefit of using a data representation language, as the Examiner contends. Furthermore, the mere fact that XML was in existence at the time of Applicants' invention does render its use obvious as implied by the Examiner. As the Federal Circuit stated in *In re Kotzab*, 55 USPQ2d 1313, 1316 (Fed. Cir. 2000):

> Most if not all inventions arise from a combination of old elements.
> However, identification in the prior art of each individual part claimed is
> insufficient to defeat patentability of the whole claimed invention. Rather,
> to establish obviousness based on a combination of the elements disclosed
> in the prior art, there must be some motivation, suggestion or teaching of
> the desirability of making the specific combination that was made by the
> applicant.

Additionally, as shown above regarding claim 7, both Lehman and Ford both teach away from using a schema express in a data representation language. Therefore, Applicants can see no motivation to modify Lehman in view of Ford to use XML to express such a schema, as the Examiner contends.

Therefore, for at least the reasons given above, the rejection of claim 8 is not supported by the prior art and its removal is respectfully requested. Similar remarks as discussed above in regard to claim 8 apply to claims 19 and 30.

Regarding claims 5, 9-11, 16, 20-22, 27 and 31-33 the Examiner fails to provide any specific reasons for his rejection of these claims. Applicants can find no reference in either Lehman or Ford, either separately or in combination that teaches the limitations of

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these claims and therefore respectfully request removal of these rejections. The Examiner only discusses combining Lehman with the ability to add functionality to a TSpaces server from Ford and with XML. Applicants fail to see the relevance of these combinations to the specific limitations of claims 5, 9-11, 16, 20-22, 27 and 31-33.

Claims 2-4, 13-15 and 24-26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lehman in view of Oliver (U.S. Pub. No. 2002/0133412).

Applicants assume that the Examiner intended to reject claims 2-4, 13-15 and 24-26 under 35 U.S.C. § 103(a) as being unpatentable over Lehman in view Ford, in further view of Oliver, due to the Examiner statement that "Lehman and [Ford] are relied upon for their teachings."

Regarding claim 3, the Examiner presumably contends that Lehman in view of Ford in further view of Oliver teaches a client sending the authentication token to a second client and the second client accessing the second space by sending to the second space one of the messages specified by the second schema. Applicants, however, disagree with the Examiner's contention.

The Examiner admits that Lehman does not teach the use of authentication tokens. Applicants can find no teaching in Ford regarding authentication tokens. Oliver teaches a system for managing client accounts and controlling access to resources (Oliver, abstract) that uses authentication tokens; however, Oliver fails to teach a client sending an authentication token to a second client. Oliver teaches that an authentication token contains information that identifies the associated user (Oliver, paragraph 126). Hence, it would not make sense for a client to send such an authentication token to a second client, as the authentication token would not then properly identify the second client.

Further, as shown above, neither Lehman nor Ford, separately or in combination, teach the use of a schema, nor do they teach accessing a space by sending messages

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specified by a schema. Oliver teaches the use of authentication tokens, but Applicants can find no teach in Oliver regarding sending a message specified in a schema.

Thus, Lehman in view of Ford, in further view of Oliver fails to teach client sending the authentication token to a second client and the second client accessing the second space by sending to the second space one of the messages specified by the second schema, as the Examiner contends.

Therefore, for at least the reasons given above, the rejection of claim 3 is not supported by the prior art and its removal is respectfully requested. Similar remarks as discussed above in regard to claim 3 apply to claims 14, and 25.

Regarding claim 4, Applicant can find no reference in Lehman, Ford, or Oliver, individually or in any combination that teaches a client modifying a security policy of the second space, whereby the second space is configured to permit access to a second client, as the Examiner implies. As the Examiner has failed to cite any particular reference in either Lehman, Ford or Oliver to support the board statement that claim 4 is rejected in light of the teachings and motivations of claims 1 and 2, as they "refer to the use and manipulation of security measures including, but not limited to, authentication means" (page 7, lines 9-12). Therefore, Applicants assert that the rejection of claim 4 is not supported by the prior art and its removal is respectfully requested. Similar remarks as discussed above in regard to claim 4 apply to claims 15, and 26.

Claims 1-33 are further rejected under 35 U.S.C. § 103(a) as being unpatentable over Lehman in view of Ford and in further view of "IBM Systems Journal, Vol. 37, No. 3" by Wyckoff, McLaughry, Lehman and Ford, 1998 (hereinafter "Wyckoff").

Applicants' arguments given above regarding Lehman in view of Ford regarding claim 1 apply here as well.

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In addition, Wyckoff presents an introduction to both Tuplespaces and TSpaces that is largely identical to both Lehman and Ford. Wyckoff fails to teach that information usable to access a space is <u>provided in an advertisement</u> for the space. Wyckoff fails to mention advertisements at all. Wyckoff teaches only that clients include "a low-level communication library for sending requests to the T Spaces server" (Wyckoff, page 11, lines 1 – 3). Applicants can find no reference in Wyckoff to the use of an advertisement providing information usable to access a first space, as the Examiner contends.

Further, Wyckoff fails to teach that an <u>advertisement</u> for the first space <u>comprises a first schema</u>, wherein the <u>first schema specifies one or more messages</u> usable to invoke functions on the first space. As described above, Wyckoff fails to teach the use of an advertisement for the first space and thus also fails to teach such an advertisement comprising a schema specifying one or more messages usable to invoke functions on first space. In addition, Wyckoff specifically <u>teaches away</u> the use of schemas by teaching that Tuplespaces do not rely on a schema and stressing the benefits from the added flexibility of not using a schema (Wyckoff, page 7, lines 1-5). Thus, Wyckoff clearly fails to teach a client sending to the first space one of the messages specified by the first schema as the Examiner suggests.

As shown above, Wyckoff fails to teach the use of advertisements and teaches away from the use of schemas. Therefore, Wyckoff must necessarily fail to teach wherein information usable to access the second space is provided in <u>an advertisement for the second space</u>, wherein the advertisement for the second space <u>comprises a second schema</u>, and wherein the <u>second schema specifies one or more messages usable to invoke functions of the second space</u>; and the request client accessing the second space by <u>sending to the second space one of the messages specified by the second schema</u>.

Thus, for at least the reasons given above, the rejection of claim 1 is not supported by the prior art and its removal is respectfully requested. Similar remarks as discussed above in regard to claim 1 apply to claims 12, and 23.

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Regarding claim 2, the Examiner has already noted that Lehman does not teach the use of authentication tokens. As shown above Ford also fails to the teach authentication tokens. Further, since Wyckoff is nearly identical to both Lehman and Ford, Wyckoff also fails to teach or suggest authentication tokens. Regarding the Examiner's states of "salient features of the Tspace system, among which are access controls which may include, but not limited to security polices" taught by Wyckoff, Applicants submit that at this cited reference, Wyckoff actually states, "[u]sers can establish security policies by setting user and group permissions on a Tuplespace basis" (Wyckoff, page 7, lines 54-55). Extending these security policies to include the use of authentication tokens is clearly not supported by any teaching or suggestion in Wyckoff and is mere speculation on the part of the Examiner.

Therefore, for at least the reasons given above, the rejection of claim 2 is not supported by the prior art and its removal is respectfully requested. Similar remarks as discussed above in regard to claim 2 apply to claims 3,4, 13-15, and 24-26.

Regarding claims 5-12, 16-22, and 27-33, the Examiner fails to provide any specific reasons for his rejection of these claims. The Examiner only discusses combining Lehman in view of Ford with XML and the security policies of Wyckoff, described above. Applicants fail to see the relevance of these combinations to these claims 5-12, 16-22, and 27-33. Applicants can find no reference in Lehman, Ford, or Wyckoff, either independently or in any combination that teaches the limitations of these claims and therefore respectfully request removal of these rejections.

Applicants also assert that numerous other ones of the dependent claims recite further distinctions over the cited art. Since the rejection has been shown to be unsupported for the independent claims, a further discussion in regard to the remaining dependent claims is not necessary at this time.

As such, Applicant respectfully requests removal of the 35 U.S.C. § 103(a) rejections.

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Information Disclosure Statement:

The Examiner contends that information disclosure statements filed August 16, 2001, and September 17, 2001 fail to comply with 37 CFR 1.98(a)(1) due to no included Form PTO-1449. Applicants however received date-stamped return receipt postcards from the Office dated August 16, 2001 and September 17, 2001, respectively, indicating that the relevant Forms PTO-1449 were received by the Office. Therefore, these information disclosure statements were submitted in compliance with 37 CFR 1.98(a)(1) and must be considered. For the Examiner's convenience, Applicants are supplying herewith copies of the previously submitted Forms PTO-1449 and of the received return receipt postcards.

As such, Applicants request the Examiner to carefully consider the listed references and return copies of the signed and initialed Forms PTO-1449 from each statement.

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CONCLUSION

Applicants submit the application is in condition for allowance, and notice to that effect is respectfully requested.

If any extension of time (under 37 C.F.R. § 1.136) is necessary to prevent the above referenced application from becoming abandoned, Applicants hereby petition for such extension. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5181-67100/RCK.

Also enclosed herewith are the following items:

☒ Return Receipt Postcard

☐ Petition for Extension of Time

☐ Notice of Change of Address

☐ Fee Authorization Form authorizing a deposit account debit in the amount of $

for fees (   ).

☒ Copies of previously submitted forms PTO-1449 from IDSs of 8/16/01 and 9/17/01.

Respectfully submitted,

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Date: ___April 28, 2004___

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